CENTRAL REGION PATIENT CARE PROCEDURES

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Submitted by:

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CENTRAL REGION
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INTRODUCTION

WAC 246-976-960 Regional emergency medical services and trauma councils establishes the requirement for regions to adopt patient care procedures and specifically identifies elements that must be included.

(1) Regional councils shall:

(g) Adopt patient care procedure in consultation with the MPD's, local councils, and emergency communications centers. The patient care procedures shall

identify the level of medical care personnel to be dispatched to an emergency scene,

procedures for the triage of patients,

the level of trauma care facility to first receive the patient, and

the name and location of other trauma care facilities to receive the patient should an interfacility transfer be necessary.

Procedures on interfacility transfer of patients shall be consistent with the transfer procedures in chapter 70.170 RCW, and:

(i) Identify types and expected volume of trauma that may exceed regional capabilities taking into consideration resources available in other regions and adjacent states

(ii) Include description of activation of trauma system

Accordingly, the Central Region has developed and adopted Patient Care Procedures consistent with this requirement.

BACKGROUND

The Central Region's EMS and trauma care system reflects the Region's long history of collaboration in the delivery of emergency medical care. In late 1969, the Seattle Fire Department began delivering Basic Life Support and Advanced Life Support prehospital emergency care utilizing a tiered response system. EMT trained firefighters, responding on engines and aid cars, provided initial response to requests for emergency medical aid. Based at fire stations throughout the city, these providers were strategically located for optimal response times. Physician directed dispatch protocols identified those requests for emergency care for which Paramedics were simultaneously dispatched.

Following the example of the Seattle program, other programs in the Region followed. In 1973, the King County Council created the Emergency Medical Services Division of the Seattle King County Department of Public Health. The Division was charged with planning and coordinating a county wide EMS delivery system.

Regional hospitals are strong supporters and participants in EMS system. Hospitals have provided in-house opportunities for training, patient observation, continuing education and interaction with medical staff. They have also assisted prehospital agencies in the purchase of medical supplies and provision of ancillary services. Emergency physicians at eight hospitals provide on-line medical control for field care providers.

The Region's hospitals not only provide for the health care needs of King County's 1.5 million residents but are also a major supplier of health care services for the state, the Pacific Northwest and Alaska. This rich resource has also contributed significantly to the advancement of medicine. Medical research programs supported by regional hospitals are numerous. The University of Washington School of Medicine and the Fred Hutchinson Cancer Research Center coordinate internationally recognized programs.

The 35 fire departments of the Central Region are an integral part in the development of the EMS system. Each agency is committed to meeting annual average BLS response times of 5 minutes or less in urban and suburban areas and 6 minutes or less in rural areas. These agencies utilize in excess of 3200 First Responders and EMT's to staff fire department BLS response units. All agencies have been recommended for verification.

Response information from all ALS and BLS calls is collected in data bases of the Seattle Fire Department and King County EMS. In 1996 this will total close to 120,000 responses. This data is used for monitoring system performance, planning, and research. Research into the prehospital treatment of cardiac emergencies has resulted in the recognition of Seattle/King County's leadership in this field.

The Central Region has a coordinated, county-wide ALS response system. ALS response areas are assigned to maximize resources and compliment the BLS system. Paramedic unit response times are less than the state standard for urban, suburban and rural areas.

All ALS agencies are public service agencies and have been recommended for verification.

The Region has a long and mutually beneficial working agreement with the private ambulance services. The roles of the ambulance services include transport from an emergency scene, inter facility transport, and as an immediate source of additional vehicles and personnel.

Given the resources, completeness, and experience of the Central Region's EMS and hospital care system, meeting the challenge of the State Trauma plan did not require the creation or expansion of the EMS system or addition to the patient care capacity of the hospitals. Rather, it was to formalize those elements of the state trauma system plan not already in place. These Patient Care Procedures and accompanying descriptive information were developed with these facts in mind.

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PART I

Prehospital Response to an Emergency Scene

Part I: Prehospital Response to an Emergency Scene

Dispatch

Calls for emergency medical assistance are answered by the County wide Enhanced 911 system. Callers are connected with the dispatch center in the area of the incident. Dispatchers utilize guidelines to determine the nature of the emergency and manual or computerized run cards to dispatch the closest EMS units.

Dispatch guidelines include criteria for determining the level of prehospital response, BLS or BLS and ALS. Seattle Fire Department Dispatch Guidelines and King County Criteria Based Dispatch Guidelines are examples of guidelines used in the Central Region.

***Reference*:** Seattle Fire Department Dispatch Guidelines (Example)
King County Criteria Based Dispatch Guidelines (Example)
Run Cards (Examples)
Dispatch Centers Map

Basic Life Support

Basic Life Support response is provided by Seattle/ King County fire department units staffed by First Responders and EMTs. The nearest unit to an emergency scene will be dispatched following consistent dispatch guidelines. All BLS services have been recommended for trauma verification

***Reference*:** Seattle Fire Department Station Location Map
King County Fire Department Service/Area Boundaries Map
Licensed and Verified EMS Agencies

Advanced Life Support

The paramedic unit nearest the emergency scene is simultaneously dispatched consistent with dispatch guidelines. All services have been recommended for trauma verification

***Reference*:** Paramedic Primary Response Area Map

Wilderness

Wilderness response is directed by the King County Police Search and Rescue Coordinator. Affiliated search and rescue agencies provide expertise and personnel for wilderness operations. EMS units may be dispatched to a staging area depending on the nature and location of the incident.

Patients needing emergent trauma care are flown by helicopter to a trauma center. Harborview Medical Center is the primary destination for these patients.

***Reference*:** King County Police Special Operations / Search and Rescue

SEATTLE FIRE DEPARTMENT

Dispatch Guidelines (Example)

RUN CARDS

SEATTLE FIRE DEPT.

Initial Type: MED7 Initial Alarm Level: 1 Final Alarm Level: 1
Final Type: MED7 (MEDIC RESP. 7) Pri: 1 Dispo Src:
Fire Blk: 1130 Group: D1 (FP) Census Tract: 08100 Census Block: 202
Seattle Map Page: 52A Prefire:
Loc: 900 4 Ave, Sea near Marion St <400>

Adjacent Blks: 1120 2440 2480 2470 1140 1150 1160 1230 1170
Stations: 05 10 02 25 06 08 34 13 14 36
22 30 09 18 17 03 20 41 32 35
21 38 16 27 31 40 28 29 26 24
39 11 37 33

Out of Jurisdiction Y/N: N
Blk-Text: _____
_____

Med 7 = Engine 5 from Station 5
= Aid #5 from Station 10
= Medic 1 from Station 3

EASTSIDE COMMUNICATIONS

PD,C

EVENT SEQ: RT:
AD: 11511 MAIN ST._____/CITY HALL_____ # ____,BE
TYPE: HV _____ RD: PREM: eg P
RP: _____ RA: _____ PH: _____ CT: _
_____
_____
_____
_____
_____
_____
UNITS:
REC: E1, E4, E6, LF7, BI

E1___ E4___ E6___ E2___ E5___ E3___
E4___ E6___ E2___ E5___ E3___ E9___
E6___ E2___ E5___ E3___ E9___ E8___
LF7__ TR2_ L96__ TR26_ _____ _____
BI___ B2__ B21__ B11__ _____ _____

Medical Response:
Aid #1 from Station 1
Medic 1 from Overlake Hosp.

PART II

Triage of Trauma Patients

Part II: Triage of Trauma Patients

Trauma patients are triaged consistent with the Washington State Prehospital Trauma Triage (Destination) Procedures.

The destination of trauma patients is consistent with the Patient Care Procedures as adopted by the Central Region EMS and Trauma Care Council. (see Level of trauma facility to first receive patient.)

PART III

Trauma Care Facilities

Part III: Trauma Care Facilities

Rationale for Central Region Trauma Patient Triage (Destination)

The EMS and trauma system in the Central Region has been developed to both the ongoing emergency medical and trauma needs of its 1.5 million local residents and those of other regions as it remains uniquely positioned as a multi-region, multi-state referral point. The EMS system within the Central Region experiences approximately 120,000 prehospital incidents each year. Of these, 40,000 are trauma related. In 1994, 5,677 trauma cases required paramedic response. Of these 871 met major trauma inclusion criteria. In providing care for these patients, the Central Region has two goals. The first is to provide appropriate patient care and the second is to triage patients among the Central Region's eight designated trauma centers in a manner which will assure and maintain trauma care capacity and capabilities. The Region's eight trauma centers(see map Designated Trauma Centers in King County) are strategically located to provide sub regional trauma services.

The first goal of the Region, appropriateness of patient care, is actively monitored by the Regional Quality Assurance Committee. The Committee utilizes data provided by the Central Region Trauma Registry as well as treatment and outcome records of individual cases. Hospital and prehospital agency representatives participate in this process. To date, the Committee has not made any formal recommendations for modification of triage procedures based upon appropriateness of care issues.

The Region has also established an expectation that patients meeting major trauma criteria will be transported to the Level I designated facility in at least 85% of the cases. This initial benchmark figure reflects the estimate of patients who would benefit most from treatment at the Level I trauma center. The remaining 15% are distributed among the other seven trauma centers. The resources and care provided at these centers easily exceed the minimums required for Level III and IV trauma centers. The distribution of patients in this manner addresses the second goal of the region.

Physician supervision and direction of paramedics has been a integral part the of the EMS system in Seattle/King County since its inception. Paramedics treating medical and trauma patients are required to contact online medical control. The destination of trauma patients will continue to be determined through consultation with on line medical control. Each of the Region's Trauma centers provides online medical control for paramedic units within a specific response area. The trauma center's online medical control physician is aware of the status and trauma capabilities available at any given time. Patient transport destinations are based, therefore on the patient's condition and the resources available.

Patient destination decisions are also monitored by the Regional Quality Assurance Committee. Refinement of the current destination procedures has not yet been indicated by the review process. Available data supports the decisions of the on-line medical control physicians and paramedics. In 1994, 77% of live major trauma transports were to the Level I trauma center. Preliminary data from 1995 indicates that this figure has increased to just above 80%.

Central Region Trauma Care Facilities

Level I Trauma Center

Harborview Medical Center

Level III Trauma Centers

Auburn General Hospital
Overlake Hospital Medical Center
Valley Medical Center

Level IV Trauma Centers

Evergreen Hospital Medical Center
Highline Community Hospital
Northwest Hospital
St. Francis Hospital

Level of trauma care facility to first receive the patient

In consultation with on line medical control:

The primary destination of adult patients meeting Step 1 or 2 inclusion criteria of the Prehospital Trauma(Destination) Procedures is the Level I trauma center.

The primary destination of pediatric patients meeting Step 1,2 or 3 inclusion criteria of the Prehospital Trauma(Destination) Procedures is the Level I trauma center.

The primary destinations of adult patients meeting Step 3 inclusion criteria of the Prehospital Trauma Triage (Destination) Procedures are the closest Level III or IV Trauma Centers.

Unstable Trauma patients should be managed consistent with the Prehospital Trauma Triage (Destination) Procedures. Unstable trauma patients are those needing a patent

airway or who may benefit from the initiation of fluid resuscitation. EMS providers who are unable to secure an airway or establish and intravenous line should consider these factors in the following order:

1. time to arrival of responding medic unit
2. time to rendezvous with responding medic unit
3. time to nearest Trauma Center
4. time to arrival of Airlift
5. time to nearest hospital with 24 hr Emergency Room

Providers should consult with responding medic units or on line medical control in determining a course of action.

The goal in treating the unstable trauma patient is to provide potential life saving intervention and transportation to the highest level trauma center able to provide definitive treatment. Ideally these interventions will be performed in a manner which does not unduly delay the movement of the patient. This may require EMS providers to stop at a hospital only long enough for hospital staff to perform procedures while the patient is still in the transport unit and then proceed to a Trauma Center.

Consistent with inter facility transfer agreements, trauma patients stabilized at non-designated hospital should be transferred to a Trauma Center as soon as possible. Likewise, patients stabilized at Level III or IV Trauma Centers and meeting the criteria for triage to the Level I Trauma Center should be transferred as soon as possible.

Transportation of trauma patients from wilderness areas is primarily accomplished by helicopter. Harborview Medical Center should be the primary destination of these patients

These procedures are intended to provide guidance to prehospital care providers and their medical control physicians in determining which trauma center will receive the patient.

It is important to the EMS and Trauma system in the Central Region to achieve a distribution of trauma patients among the eight designated trauma centers without compromising patient care. The trauma centers must receive an appropriate number of patients to assure and maintain trauma care capabilities. The Central Region is utilizing the Regional Trauma Registry and Quality Assurance program to monitor the triage, transportation, and outcome of trauma patients. Refinements to these procedures may be necessary in the future to meet system or patient care needs.

***Reference*:** Designated Trauma Centers in King County June 14, 1995, Map

PART IV

Interfacility Transfers

Part IV: Interfacility Transfers

Interfacility transfer agreements are a designation standard for Trauma Center Levels I-IV (See Resources and Capabilities, and Administration and Organization of WAC's). ALS and BLS providers provide inter facility transfers consistent with these agreements.

It is anticipated that inter facility transfers in the Central Region will occur between a Level III or IV Trauma Center to the Level I Trauma Center.

The Level I Adult and Pediatric Trauma Center is:

Harborview Medical Center
325 Ninth Avenue
Seattle, WA.

PART V

Types and Expected Volume of Trauma

Part V: Types and Expected Volume of Trauma

The Central Region has adequate resources to meet normal trauma patient volumes. Types and volumes are monitored through the Regional Trauma Registry and Quality Assurance Program.

Large MCI's may require the triage of patients to trauma centers in adjacent counties or to non-designated King County hospitals.

Reference: Trauma Registry Report - Hospital Edition

PART VI

Activation of Trauma System

WAC 246-976-010

"Activation of trauma system means" means a process whereby a prehospital provider identifies the major trauma patient by using the prehospital trauma triage procedures, and notifies from the field both dispatch and medical control, who mobilize resources to care for the patient in accordance with regional patient care procedures.

2. Monitoring of response times is a function of the Regional Quality assurance program. The data bases of the Seattle Fire Department, King County EMS and the Regional Trauma Registry provide information for this purpose.

3. START triage is included within the patient Care Guidelines for Basic Life Support established for Seattle/King County.

4. The attached Hospital Resource Directory and Prehospital Transportation Guidelines provide direction for transportation of non-major trauma patients

5. Guidance for the treatment of unstable trauma patients is also found in the Resource Directory and Transportation Guidelines

6. The pediatric guidelines for pediatric patients developed by the Pediatric TAC are for interfacility transfers. Inter facility transfer agreements are a requirement of designated trauma centers.

The Central Region has but one designated Pediatric Trauma Center, Harborview Medical Centers.

10. Interfacility transfer agreements are a designation standard for Trauma Center Levels I-IV (See Resources and Capabilities, and Administration and Organization of WAC's)

11. Diversion policies are a designation standard for Trauma Center Levels I-IV (See Resources and Capabilities, and Administration and Organization. of WAC's)